Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

APR 25 1930
PLANT IND.

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

APR 12 1930

18

566385

REPORT FOR WEEK ENDING APRIL 12, 1930.

HAVRE:

Snowfall during December of the past winter was very much above normal. Temperatures were low during December and extremely low during January. February was warm and open. Temperatures were not high during March but field work did not start until the first week in April.

There has been some killing of winter wheat but just how much cannot be determined as yet. It now appears that there will be quite a little contrast between surface and furrow drill planting. Grasses and alfalfa apparently came through the winter in good shape.

April, to date has been unusually warm. Lilacs and gooseberries are showing leaf and domestic grasses have made quite a little growth. The buds on many of the native trees are starting to break. Native grass has started but is not tall enough for much grazing.

The field work to date has been largely the preparation of seed-bed; only the early dates of seeding have been made. The following gives the precipitation for the winter.

Month	Amount of Precipitation
December	.93
January	.15
February	.22
March	.56
April to the 12th	Trace

Average temperatures April 1 to 12: Maximum 69.3;minimum 35.6.

JUDITH BASIN:

The outstanding climatic features during the latter part of 1929 in Central Montana were the cool weather during September, the mild, pleasant, though dry, conditions during October, the cold and dry November, and the heavy snowfall and high precipitation during December.

January, 1930 was the second coldest of record, which in turn was succeeded by the second warmest February.

Judith Basin, continued:

Near normal temperature, with an excess of precipitation during March, was followed by unseasonably warm weather with little precipitation and some record breaking high temperatures during the first week of April.

The heavy snow of January blocked highways to car traffic for a three-week period. Heavy snow in the north and west shelterbelts broke the trees badly in the close plantings. Wider spacings are in normal condition.

Winter wheat was generally protected with snow from extreme low temperatures and came through the winter in good condition. Farmers report as good stands as ever obtained and are jubilant over crop prospects. Range conditions are favorable although light feeding is still continued.

Field work is just beginning in most sections of the Basin. Some breaking is being done with the intention of planting flax. Spring wheat acreages will be reduced, but plantings of feed crops, flax, and mustard will bring the crop acreage to normal.

Ground is being prepared on the station for planting shelterbelts on the north and west of the livestock yards.
Maximum temperature 78; minimum 32; precipitation .04 inch.

HUNTLEY:

The past winter was comparatively mild and open in this section of Montana. As is often the case during such seasons, considerable damage was done to winter wheat through exposure, drought, and soil blowing. Stands of this crop are thin on most fields and present indications are that they will be weedy.

Frost left the ground early in February and some field work was done on neighboring farms during the month. All fall plowing on the Station was worked down early in March, and spring plowing was begun on March 28. Although precipitation during March was above the average, most of the moisture was lost by evaporation before it entered the soil and many plots were found to be dry below the depth of plowing.

Huntley, continued:

Seeding of small grain and seed crops in the rotations was completed April 8, and land is about ready for the variety and miscellaneous plantings. The warm weather of the past two weeks has brought on a heavy growth of weeds on all land not yet cultivated. Alfalfa and bromegrass are starting slowly and show the need of rain.

Maximum temperature 85; minimum 30; precipitation .06 inch.

SHERIDAN:

The first part of the past winter was quite severe and there was a heavy cover of snow on the ground at that time. A large part of the snow disappeared the latter part of December and the first of January. The mean temperature for January was the lowest that has been recorded at the local Weather Bureau station and was followed by the warmest February recorded here. The first part of March also was warm, but the remainder of the month was colder than usual, the mean temperature for the month being about the average. Precipitation was light for all three months (January, February, and March), and there has been none so far in April. This month to date has been the warmest yet recorded here for this time of the season.

A large part of the early winter precipitation apparently went into the ground. Land in stubble over the winter show good moisture conditions to a depth of from one and a half to two feet. Two fall plowed plots in small grain last year were sampled to a depth of four feet without striking any dry soil.

Fields were not dry enough on the station for any cultivation until April 2, although considerable field work had been done in this section earlier. The first date-of-seeding spring grain was sown on the 2nd. The barley seeded then has emerged, and wheat and one variety of oats were beginning to emerge to-day.

Work in the rotation field was started April 7. All seeding of early spring grain, peas, alfalfa, brome, and sweet clover in the rotations has been completed, and seeding of the spring grain varieties is in progress. Seed blocks of oats and wheat, and barley for pastures, were seeded the latter part of last week. Nearly all plots in the north half of the rotation field, and those on the south side in the lower part of the field plowed rather wet and failed to work down in very good condition. The remainder of the plots on the south side of the field worked nicely.

Sheridan, continued:

Winter wheat has been slow in showing up, but all seedings of this crop now appear to be in fairly good condition, although somewhat backward. Crested wheat grass and brome have been making a fast growth during the week, and weeds also are getting a good start.

Maximum temperature 83; minimum 31; precipitation Trace.

DICKINSON:

Mild, pleasant weather continued through the week with temperatures above normal. Field work went along without interruption through the week except for a short period Saturday forenoon due to a rain of .33 inch Friday night.

Wheat, oats, barley, field peas, and sweet clover were seeded on the rotations. Wheat was seeded on April 8, a week earlier than in 1929, and nearly a week earlier than average.

Most of the cereal nursery and a part of the forage crop nursery was seeded.

Due to the warm days this week vegetation has greened up rapidly. Leaves are showing on some of the shrubbery and buds on trees are swelling. This is unfavorable for fruit in case of later frosts. Winter wheat and rye have better early spring stands than for several years.

The winter of 1929-30 was of about average severity. Snowfall was heavy but temperatures were less severe than the previous winter. A snowfall of 65.5 inches in 1929 was the heaviest recorded in recent years. Although the late summer of 1929 was very dry, rains in the fall and a heavy snowfall in December brought the annual precipitation up to 17.21 inches. During the seven months ending with March the precipitation was 2.55 inches above normal.

Maximum temperature 79; minimum 28; precipitation .33 inch.

MANDAN:

Agronomy

The past winter was cold for the most part, with some heavy falls of snow. Most of December and about three weeks in January, were exceptionally cold. The coldest temperature during the winter was -31° F. on January 9. The month of February warmed up rapidly toward the middle of the month. The Heart River went out on February 19, and flooded the flats between the Station and Mandan and washed out the road.

One of the heaviest snowfalls in the history of the country for a 24-hour period, came on February 24, when over 10 inches was recorded. The snow contained over an inch of water.

Field work started in April 1, but plowing was delayed two or three days because of frost in the ground. The seed-bed preparations are complete for spring grains, and the plots are being lined up to-day. Wheat will no doubt be seeded early in the week.

The precipitation for the year to date is as follows: January .19 inch; February 1.68 inches; March, Trace; April .07 inch. The amount for February was the highest during 55 years of record, and March was the lowest.

The soil is in good condition for the seeding of spring grains. It will, however, soon be in need of more moisture.
Maximum temperature 81; minimum 26; precipitation .07 inch.

Arboriculture

Green ash, boxelder, Russian olive, caragana, choke-cherry, and tatarian maple seed, was planted in the nursery fields the early part of the week.

The nursery stock has been transferred from the heeling-in bed to the packing room, in readiness for shipment to shelterbelt cooperators. Shipping operations commenced Friday, April 11.

Mandan, continued:

Horticulture

Continued warm weather has started buds to swell, and if it continues it is feared that the fruit trees will bloom unusually early this spring.

At this time it does not appear that winter injury will be as severe as a year ago. Trees weakened by drought last summer seem to have suffered most. Accordingly there is considerable killing in closely planted blocks.

Pruning of orchards and small fruits has been in progress throughout the week.

The usual routine work with sowing seeds, transplanting and potting, has been in course of progress during the past three weeks. Vegetable plants for variety tests, garden project, and breeding work, are nicely under way. Ornamental plants such as Cannas, Colens, Olyssum, and Geraniums, promise an adequate supply for station use this coming season.

No outdoor plantingshave as yet been done, but it is intended to do so early next week. If the present weather continues, it will be a very early spring for garden work in this section. The soil is in unusually good condition, with apparently plenty of moisture for seed germination.

Trees and shrubs are starting to bud on the station campus. Lilacs, currant, and Siberian apricot, are farthest advanced. The latter, in fact, is showing color in the flower buds.

There is apparently little winter injury, and the plants seem to be in good condition.

BELLE FOURCHE:

With the exception of January, which was one of the coldest months in the history of this station, the winter was quite moderate. December was warmer than usual, and February was the warmest winter month on record, the mean temperature for February being five degrees above the previous highest mean temperature for that month. The precipitation was very light during the winter and has been below normal for the past five months. Since January 1, a total of only .90 inch precipitation has been received to date.

The spring opened unusually early, and work in the field commenced the second week in March, but colder weather during the latter half of March retarded thawing of the ground so that plowing generally was not possible until after the first of April. Abnormally warm weather has prevailed since April 3. The daily maximum temperatures have ranged from 67 to 84, and the minimum temperatures have ranged from 27 to 47. High winds have been almost a daily occurrence during this period, and considerable soil blowing has taken place. Aside from traces of rain on April 9 and April 10, no precipitation has been received, and the surface soil has become quite dry and loose. Considerable moisture is present in the subsoil, but the germination of spring seeded crops will not be satisfactory until after a rain is received.

Spring wheat and oats were seeded on the dry land rotation plots April 5, and seeding of barley, field peas, sweet clover, and bromegrass was completed during the forepart of the week. Alfalfa, sweet clover, and bromegrass survived the winter practically uninjured, and have resumed growth. Winter wheat has been damaged quite extensively by drifting soil during the past two weeks, and considerable reseeding may be necessary. Winter rye has suffered very little injury and is making a vigorous growth. As a result of the abnormally warm weather, most of the trees and bushes are budding or beginning to leaf.

Maximum temperature 84; minimum 32; precipitation Trace.

ARDMORE: (Report for Week Ending March 22, 1930.)

The winter of 1929-30 as a whole was above normal in temperature and below normal in precipitation. The mean temperature for January was the lowest on record, but temperatures during the other winter months were mild. About four inches of snow was on the ground at the end of January, but this disappeared early in February, and by the middle of February the soil was dry and thawed out to a depth sufficient to permit field work. Fiftieth acre plots of wheat, oats, and barley were planted about the middle of February as a check against seeding at the usual time.

Field cultivation did not commence until about the middle of March, when it was necessary to disk corn ground to prevent soil blowing. Seeding began on March 17, and during the week all large fields of oats and barley were planted.

Small amounts of snow were recorded on four mornings during the week, but in no case was the amount great enough to delay seeding for more than a few hours.

The plots to be spring plowed for small grain were plowed on March 21 and 22.

Winter grains came through the winter in fair condition, though some plots of winter wheat were badly damaged by rabbits. Some injury was caused by soil blowing, and it is still too early to tell how complete the recovery will be.

The orchard trees and ornamentals apparently came through the winter with very little winter injury.

The precipitation for the year to date is as follows: January .36 inch; February .18 inch; March to date .20 inch.

ARDMORE:

The week was generally favorable for field work, though rains on April 9 and 10 wet the fields temporarily. The two showers moistened the seed-bed thoroughly and insured germination of grain on all plots. Many plots were too dry for the grain to germinate before these rains.

Ardmore, continued:

Field work during the week consisted of seeding crested wheat grass in the twenty acre pasture, re-seeding some alfalfa ground, and plowing for flax.

Barley in the fields and on the plots emerged during the week. Barley planted on February 17 emerged only one day earlier than barley planted on April 1. Wheat and oats in the fields emerged during the week, and wheat and oats in the rotations are commencing to come up.

Winter grains have recovered to some extent during the week. All plots of winter rye are in good condition, but winter wheat on all but a few plots will have a thin stand.

The two lots of sows and pigs on self feeder test during the gestation period were weighed on April 8. The gains were as follows:

	FEED	Gain per head LBS. Sows	Pigs
Lot 1	Corn, barley, oats, middlings skim milk and tankage.	17.4	9.5
Lot 2	Corn and tankage.	-2.4	8.3

The gains of the steers during the winter feeding experiment are as follows:

	FEED	1	2	3	4	5	Total
Lot 1	Alfalfa hay 8 lbs., Oat straw 4 lbs. daily	11.4	1.4	13.9	-15.0	11.8	23.5
Lot 2	Corn silage 16 lbs., Oat straw 4 lbs. daily	-0.7	1.8	12.9	-6.8	23.6	30.8
Lot 3*	Sorgo hay 14 lbs. daily	-7.1	21.4	19.3	-10.4	26.1	49.3

* The steers on Lot No. 3 were fed 12 lbs. of sorgo hay per head daily during the first period and were fed at the rate of 14 lbs. per head daily beginning the second period.

Maximum temperature 85. This is the highest temperature to occur before April 10 on record at this station.
Minimum 30; precipitation .67 inch.

ARCHER:

The weather during September, October, and November of 1929 was favorable for winter cereals. December received only a trace of precipitation. January was marked by a number of squalls without any real storms. From December to the first of April the weather was dryer than usual. The temperature during January was very cold, there being 19 days during which zero or less was recorded. The minimum -36° was recorded the morning of January 17. February was much milder and March permitted some field work. April so far has been quite warm. Some of the early trees are coming out in leaf. There was considerable soil blowing during March, and so far in April there has been one day during which the soil moved badly.

Winter wheat on fallow suffered to some extent from soil blowing. That seeded with the common drill is very thin while that seeded with the furrow drill is in good shape. At present the fallow plots appear quite green. Seedings later than the 15th of September are making a poor showing.

Spring work at the station has consisted of hauling manure, plowing and duckfooting the Dry-Land plots, and the seeding of 40 acres of cereals in the dairy field.

Maximum temperature 78; minimum 36; precipitation .40 inch.

AKRON:

Winter broke away for field work about March 18. Early spring seeding at this station was delayed by carry-over of fall work such as hauling-in and weighing corn and sorghum plots. Seeding has been actively in progress this past week, however, and this week-end finds all the rotation plots seeded and everything in readiness for seeding the variety oats and barley early next week.

Winter set in last fall with a very heavy, drizzling rain the later part of October. Ground was muddy, or frozen, or covered with snow from that time to about March 18.

Akron, continued:

The fall was favorable for emerged stands of winter wheat. However, the winter proved very severe on winter wheat in regions where more of the late October rain fell as snow. In those regions which are to be found in the Leroy and Burdette and Akron Communities winter wheat appears to have been killed fully 50 per cent. Here on the station there was also much winter killing, but within the past week since the wheat has started spring growth this damage does not appear to be measurable so far as possible yields are concerned.

Soil not worked is very badly cracked and losing moisture rapidly during the hot, dry weather experienced at the present time. Effort is being made to get over all such land on the station at the earliest date.

Winter wheat actually seems to be suffering for lack of moisture, though there is ample subsoil moisture within reasonable distance of the surface.

Experimental pigs and lambs are being triple weighed this week-end, so that the data may be available at the Feeders' Day next Thursday, April 17.

Messrs. Deming and Abercrombe were down this week-end making spring count of the Cooperative Winter Wheat Nursery and seeding the spring Grain Nursery.
Maximum temperature 86; minimum 32; precipitation none.

NORTH PLATTE:

Spring work at North Platte began somewhat earlier than average this year. Kochia weeds were nicely started by February 20. Teams were first put into the fields on March 11. First work was, as usual, the stirring of open ground to stop soil blowing.

On the D. L. A. plots, spring wheat was seeded March 15, and oats and barley March 27-28.

With the exception of some light snow flurries early in March, no precipitation has occurred this spring. Winter precipitation was also light. Sufficient moisture remained in the soil from last season to germinate early spring seeded grains, but the surface soil is at present very dry.

North Platte, continued:

Winter wheat made a good winter survival and the present condition is excellent. The subsoil moisture supply is much better under early fall plowing than it is under late plowing, but there is not at present much difference in the appearance of winter wheat between the two.

COLBY:

There was a small per cent of winter killing on all the winter wheat plots, except in Rotation 259 -winter wheat after milo- where about 25 per cent of the stand winter killed. All the wheat, especially that on summber fallow, is making a rapid growth now. The cool weather during most of March held it back so that it did not use much moisture, but now it has begun to use moisture rapidly. Even with the slight winter killing, the stand is very thick. The rains and snows of last fall wet the soil down to approximately two feet on cropped land, so that as yet there is no scarcity of moisture. With practically no precipitation since December, the surface soil has dried out to a depth of from four to six inches.

All spring grains were slow in coming up. Spring wheat and barley sown March 13 did not come up until April 4, and oats sown March 19 did not come up until April 12. There was no lack of moisture but it was too cold. Good stands were secured of all the small grains as well as the field peas. Since coming up they have been making rapid growth.

The weather during February was unusually warm. This continued for a few days in March. During the last two weeks of March, however, the ground froze almost every night. April has been warm. On Wednesday of this week the temperature rose to 93. Since then we have had cloudy and threatening weather alternating with clear, sultry weather. There have been very few high winds this spring. On March 24 a high wind caused considerable soil blowing, and on Tuesday and Wednesday of this week there was some soil blowing. Aside from that the weather has been comparatively calm.

Most of the apricot buds were killed by the March freezes. All the other fruit is budding and coming into bloom now.

Colby, continued:

Director Call visited the Station Wednesday, April 9. Maximum temperature 93; minimum 32;precipitation .04 inch.

Precipitation since January 1: January .20 inch; February .32 inch; March .08 inch; April .04 inch. Total .64 inch. Average for January, February and March 1.74 inches.

GARDEN CITY:

Five early fall listed wheat plots which go into kafir this spring were rod weeded on Monday, April 7. Volunteer wheat was beginning to make a heavy growth on these plots. The rod weeder effectively destroyed all the growth on the ridges and left very little on the sides of the ridges. Wheat on the project is still making good growth and not suffering seriously from lack of sufficient moisture at the present time. However, there is one block in the date of planting tests which is dying for lack of moisture. The August 31 and September 10 dates of seeding have been seriously hurt by dry weather. These two days produced a heavy growth and now there is not sufficient moisture in the soil.

Until rains come the spring grains will not come up. Soil is dry and dusty in places. We have not had serious trouble with soil blowing this spring, except in some roadways. Soil blowing has been controlled effectively with the spring tooth cultivator.

Dean L. E. Call, Director of the Experiment Station, was a visitor Friday, April 11. An inspection trip was made with Dean Call down into the southwest corner of Kansas to observe the condition of the wheat and the damage which dry weather is causing. Some fields are turning yellow and seriously in need of moisture. Many fields have a large amount of volunteer wheat in them. They are not in very good condition to stand continued dry weather very long. Other fields in the immediate vicinity are in excellent condition where seeding was done on fallow or well prepared seedbeds. None of the fields where damage from dry weather is the most severe is hurt beyond recovery if we have some good rains in a few days.

Maximum ~~temperature~~ 95; minimum 33; precipitation none.

HAYS:

The weather during the past week has been dry with more wind than for sometime, and an unusually high maximum temperature for one day. No precipitation of consequence has occurred since last November, the total for December, January, February and March being .98 inch. A good portion of the 1.51 inches in November fell in the form of snow, much of which drifted into the roads so not a great deal of it remained on the fields.

As a matter of fact, the four-month dry period during which less than one-third the average rain fall has occurred has been a streak of good fortune for the wheat farmers in this section, although it is not generally recognized as such by them. Much of the wheat appears to be suffering from drought as a result of too much fall and winter growth. Rains during the last month or six weeks, had it occurred as the farmers desired, would have produced so much growth that no reasonable amount of rain fall from now to harvest could have matured the crop. The drought has not killed many plants, but it has greatly reduced the number of stalks to the plant, so there is a much better chance for a crop now than before.

There is a wide variation in the appearance of the wheat on ground prepared by different methods. On fallow the wheat is thick and heavy, six to eight inches high, and a very dark green color. On early fall plowing the growth is not so thick and heavy as that on fallow, but is most too rank, about four to six inches high and of a dark green color. On listing (early) and early disking the growth is not so heavy as on plowing, there being fewer stalks and of a lighter green color. The fact that it does not look quite so good now as that on fall plowing likely will prove to be an advantage. On stubbled-in plots, late disked, and burned-off, the growth is very light, and light green in color. On ground early one-wayed it looks much the same as on listed ground. Late plowed ground carries wheat much lighter in growth and color than early plowing or listing. Wheat on corn stubble land takes its place as about medium in the list, with that on kafir stubble much poorer. Wheat drilled in the stalks of row crops looks poorer than that drilled where the row crops were harvested for stover crops.

Spring wheat, oats, and barley are up to a good stand on all except spring plowed plots and are beginning to make fair growth, but would be better with some rain. On spring plowed ground the stand is very thin, due to dry surface soil. Peas are up and looking

Hays, continued:

good. Bromegrass has not yet germinated and probably will not until after it rains. Winter rye grown for green manure is needing rain badly. Rye seems to suffer for moisture earlier than winter wheat.

TUCUMCARI:

The building work which has been underway since late October is practically completed and to-day, April 12, foreman Morley and his crew finished their duties. A slight amount of painting and a considerable amount of outside cleaning up remain to be done. Mr. Morley and other carpenters from the north leave tomorrow for Cheyenne and Fort Collins, expecting to arrive home in a pre-Easter blizzard, after experiencing exceptionally warm, quiet weather here the past few weeks.

Climatic conditions have run to extremes the past winter. November was the coldest November on record; December was considerably warmer than November. January was the coldest month ever recorded here, and 12 degrees below the long-time average mean. February was unusually warm, and March was considerably below the long-time average mean. Precipitation since January 1st totals .51 inch; since December 1st .61 inch. In spite of umusual weather, the work progressed without delay and only at rare intervals did the low temperatures of November and January cause the slightest inconvenience. Wind velocity has been exceptionally low, so erection of garages and the laying of some 160 M shingles was performed without trouble.

Crop yields in 1929 were considerably below the average in this locality, but much better than could have been expected. Seasonal precipitation totaled only 6.76 inches, by far the lowest ever recorded in a growing season, while the total for the year was only 11.26 inches. Station yields and those over much of the county were approximately two-thirds of average. No failures were recorded on the station, although several variety corn plots produced only fodder. Cotton was the only crop which produced at least an average yield. Areas favored by rains produced very good crops, while even in the driest portions of the county very few total failures were noted.

Tucumcari, continued:

A very heavy wheat acreage was seeded last fall and at present much of this crop is in a critical condition. Early wheat still looks remarkably well, for winds have damaged it but little. It is very evident that moisture is needed, however, on even the best fields. Late sown wheat seems shallow rooted and is fast depreciating. Farmers are buying more tractors than in any previous year in this locality.

Very little field work has been performed on the station to date and the entire station crew will be needed for about two weeks to clean up the grounds. Where listing has been done the soil had good tilth and seemed to have a fair amount of moisture below the first two inches.

Mr. E. F. Chilcott who arrived from Woodward yesterday leaves tomorrow for Dalhart.

Maximum temperature 90; minimum 40; precipitation .03 inch.
Wind velocity 4.6 miles per hour.

DALHART:

A rain of .21 of an inch, last evening, was the first precipitation for April. The precipitation for the five preceding months totaled 1.70 inches and was distributed, by months, as next given: November .89 inch, December .09 inch, January .09 inch, February Trace, and March .63 inch. The surface soil is getting very dry and it is hoped that additional moisture will come soon. Wheat, throughout the Panhandle, is needing rain. Many fields are suffering for moisture but there is no abandonment of acreage yet. Wheat on this Station, especially on fallow, has a very good appearance. It has growth sufficient now to use up the available moisture before long.

Winter wheat and winter rye came through the winter in good condition. The same deficiencies in stands are noted this spring as were recorded last fall; namely, the plots that were seeded on late prepared land show poor stands and poor vigor. Due to dry soil the spring cereals, oats, and barley, were not seeded until after moisture was received in March. They were seeded on March 20. Excellent stands were received of both crops. Very little growth has been made on either oats and barley, but with favorable moisture conditions, as the stands are sufficient, good yields could be expected.

Dalhart, continued:

Winter rye seeded as a cover crop for vineyard, orchard, and windbreak protection made good growth and served the purpose. The rye in the vineyard was turned under yesterday and to-day. Rye, in the vineyard, was jointing.

The apricot and peach trees on the station were damaged 100 per cent, apparently, by the hard March freezes. Some few trees of these fruits in Dalhart appear to be undamaged severely as yet. Plum trees have just finished blooming. Lilacs are just ready to burst into bloom. Chinese elm are starting their leafing out. A small quantity of Chinese elm seed was picked yesterday. A few trees, depending upon the dates of blooming, had a light crop of seed; others were all killed by freezes. Several Chinese elm trees in Dalhart, apparently getting more protection, are literally loaded with seed. Two Chinese elm trees on the station, planted two years, completely winter killed. There is a possibility that it was due to excessive growth last season, as they were in a group that grew from 6 to 12 feet last year. Some eighty species and varieties of trees and shrubs have been planted in the ornamental nursery this spring.

There have been no excessive wind velocities this spring. The wind damage by blowing soil has been negligible on the station this past winter and spring to date. Minimum temperature during the winter was 13 below zero, with below zero temperatures recorded on ten nights. November was cold and furnished much snow; December was mild and open; January was cold without much snow; February was unseasonably warm; and March was very near average, though rather cool.

Work during the week has consisted of turning under rye, hauling a few loads of dirt, pruning of trees and shrubs not previously accomplished, additional plantings of trees and shrubs, and general spring work.

Mr. Hickman Price, the Panhandle's largest wheat farmer, visited the station during the week.

Maximum temperature 90; minimum 36.

BIG SPRING:

Weather conditions during the past winter have been rather unusual in many respects. Temperatures were very mild during November and December, then during January the other extreme occurred. During this month the minimum temperature reached zero, which was the lowest this station has recorded during the past seven years. The average minimum for the month was considerably below normal. February was extremely moderate, but several freezes occurred during March.

Rainfall during the past winter has been very light. During the last six months the precipitation has consisted of only a few showers which barely moistened the surface. The following table shows the precipitation for this period as compared with the 25-year average.

	Nov.	Dec.	Jan.	Feb.	Mar.
1929-30	.74	0	.46	0	.11
25-yr.ave.	1.15	.61	.40	.67	.88

The late freezes of March killed all of the peaches and most of the plums, so the fruit crop throughout this section will be very light this year.

The cooperative field and increase fields were plowed during the winter, but no spring plowing has been attempted as yet. It has been so dry that a large number of farmers throughout the county have not put a plow in the field as yet.

Work during the past week has consisted of putting in a cattle guard at the entrance to the station grounds and rebuilding fence.

Maximum temperature 96; minimum 50; precipitation none.

LAWTON:

The winter of 1929-30 was the coldest in the history of the station records. People who have resided here since 1901 claim the January storms and winter conditions have been equaled but once, about 25 years ago.

Lawton, continued:

December temperatures were above normal, especially the latter part of the month, when the maximum ranged from 55 to 74. This condition, however, was quickly reversed in January when the mean monthly temperature was 15 degrees below normal. Subzero temperatures of -8;-4;-8; and -5 were recorded January 17, 18, 21 and 22, respectively. Sleet and snow driven by a high wind velocity January 7 to 9 drifted heavily over the country. This precipitation was composed mostly of sleet that formed a covering of ice on the ground that did not melt until February 3. Snow and high winds again enveloped the country January 17 to 21. Transportation and traffic on highways and railroads were seriously hampered most of the month.

The total January precipitation of .82 inch consisted of snow and sleet. In the stubble fields a heavy covering of snow was retained. High winds cleared the wheat fields of snow leaving only a coat of ice that covered the crop nearly a month. The soil was frozen to a depth of 12 to 18 inches.

Warm weather prevailed in February when the maximum temperature ranged from 49 to 84, and the minimum from 25 to 52. March followed with prevailing cold weather and high wind velocity.

Winter and spring precipitation consisting almost entirely of sleet and snow is below normal. The monthly totals are; December .23; January .82; February .19; March .26 and April to date none. The deficiency since January 1 amounts to 3.99 inches.

High temperatures, strong winds, and the lack of rain are the distinguishing climatic features of April 1 to 12. Maximum temperatures of 95, 92 and 90 were recorded on the 7th, 9th, and 10th. These temperatures have been exceeded in April but once, and that was in 1925.

Wheat, winter oats, and winter barley made about an average fall growth before freezing temperatures checked further development. The supply of soil moisture was just about sufficient to support the existing growth and keep the plants in a healthy condition during a normal winter. Early in February when the ice covering melted it was soon evident that small grain crops had suffered considerable injury. All varieties and all dates-of-seeding of winter barley and winter oats were entirely winter-killed.

Lawton, continued:

In the wheat variety test, Fultz and Mediterranean were entirely killed. Blackhull and Fulcaster survived with about ten per cent of a stand. Turkey red, Kanred, Tenmarq, Kharkof, and Harvest Queen show but little injury.

Spring oats and spring barley were seeded on excellent seed-beds February 11 to 14. Germination and emergence was normal and good stands resulted. Subsequent growth of all small grains has been menaced through out the spring by dry, windy weather and the crops are in a critical condition.

Wheat averages 4 to 8 inches in height by measuring to the tip of the leaf. Tillering has been light and the plants are beginning to joint. Oats measures 2 to 4 inches and shows the need of moisture. Both crops, in most instances have a healthy color, but the plants seem unusually small at this time of the year. Under normal conditions it only is about 60 days until harvest time.

Delay in planting corn on the rotation plots continues on account of dry soil. This planting is usually done the last of March or early in April.

Alfalfa renewed growth during the warm weather in February, was nipped back by March freezes and has made but little progress since. Sweet clover seeded in the spring of 1929 did not survive the summer. Seedings made since January 1, 1930 do not show much emergence at present.

Growth of native grass is very short and backward. Farmers are required to supply additional feed to livestock and such feed is getting scarce. In some instances stock is being turned back on wheat and oats fields that are yet unpromising.

The past winter provided thorough tests for trees and shrubs. Many that were considered hardy in this section of the country were severely damaged. Unfavorable weather throughout the spring has delayed new growth. February weather stimulated early bud development of peaches, plums, and apricots and March freezes left but little prospect for such crops.

Lawton, continued:

Spring plowing of the rotation plots was completed April 10. But little moisture was encountered and the ground is dry and lumpy. Completion of seed-beds preparatory to planting must be delayed until rain falls.

PENDLETON:

The fall season of 1929 was abnormally dry. No rain of any real value fell until December. Most of the farmers in this section waited until the middle of November to seed. Very little wheat emerged during December. The wheat emerged under the snow during January with good uniform stands. This past winter was a very severe one for this section with temperatures of 20 below for about ten days, the lowest temperature was -28°. In this area close to the mountains the fall sown wheat is in fine condition, and is about six inches tall. North and west of Pendleton the fall sown wheat is in only fair condition. The stands are thin and weedy. The wheat has a poor color and needs a good rain. This is true of several other eastern Oregon counties.

The early spring field work on the station is completed. All the rotation plots and land for fallow have been plowed and harrowed. The only plowing left is the two last dates of plowing in the tillage trials. The spring sown oats, barley, wheat, peas, vetch, and rye in the rotations have emerged with good uniform stands. The varietal trials also have good stands. The alfalfa, sweet clover, and forage grasses have not emerged yet.

Precipitation:

December	3.29 inches.
January	1.45 "
February	1.81 "
March	1.48 "
April	.09 inch.

NOTES:

Mr. D. R. Burnham, Superintendent, Field Station, Tucumcari, New Mexico, advises as follows:

> "We have on hand one new 30x5, 8 ply Silvertown casing, secured through the Office perhaps a year ago. This casing has never been unwrapped and it is possible some other station of this office could use this. It will be held for further instructions. This is regular casing for model T Ford truck, rear."

If any field men have a government-owned auto truck of the Office of Dry Land Agriculture upon which this casing could be utilized, he should communicate direct with Superintendent Burnham.

****

Recently one of the Stations of this office was requested by the District Census Enumerator to fill out General Farm Schedule of the station. This office advised the Superintendent that the Bureau thinks the General Farm Schedule Form of the Census Bureau applies to private and not Government stations. But, that, after furnishing this explanation to the Census Enumerator, the Enumerator still desired the information, there would be no objection to the Station Superintendent procuring the farm schedule form from the Enumerator and filling it out.

In the case of a State Experiment Station where this office is carrying on cooperative experiments, any farm schedule form that may be made out, it would seem proper should be prepared by the Station Superintendent for the State and cover such station as a unit, rather than upon the experimental plats upon which this office is engaged.

APR 23 1930
PLANT INDUS

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

APR 19 1930

REPORT FOR THE WEEK ENDING APRIL 19, 1930.

HAVRE:

The past week has been more or less unsettled, with temperatures slightly lower than for the previous week. Rain amounting to .58 inch fell on the 14th and 15th which delayed field work until the middle of the week.

Seed-bed preparation has been progressing the last three days. Also cultivation of alfalfa and grasses in rows. Practically everything is ready to seed, but no regular seeding has been done as yet. Weeds have made a very good start for this season of the year.

Native grasses are growing slowly. Shrubbery and trees have nearly all started to leaf. Buds are showing on the lilacs.

Winter wheat has revived somewhat during the week. It looks now as though there would be considerable contrast between the dates of seeding, as well as between the furrow and surface drill methods. It now appears that there is quite a lot of injury to alfalfa. Some of it is dead and some of the plants are badly weakened. Ladak appears to be the one variety that has come through in very good shape. With the good growing conditions we are now having some of the alfalfa may revive later on.

Maximum temperature 75; minimum 35; precipitation .60 inch.

JUDITH BASIN:

Favorable growing weather with beneficial showers near the close of the week was experienced in Central Montana.

Tillage operations were in full swing in all sections with seeding just beginning in the earlier areas. In most fields early disking to start weed growth is being performed with the intention of another cultivation preceding the drill.

Spring plowing, duckfooting, and other tillage is completed on the rotation and pasture lots. Some lots have been seeded in the pastures. Grass is making rapid growth with crested wheat grass again demonstrating a week to ten days advantage in earliness.

Judith Basin, continued:

Soil moisture conditions are excellent and seeding will be under way as weather permits. A great deal of interest is shown in working of forage crops into practical and profitable rotations.

Maximum temperature 67; minimum 28; precipitation .55 inch.

HUNTLEY:

Field work has been possible every day of the past week, although light showers during some mornings have delayed getting started until the ground dried off.

A check-up on all seeded plots showed the emergence of all small grains to be about complete in most rotations, but where the land was very rough and dry at planting time the stands are quite uneven. Peas, flax, and grasses have not yet come up.

The favorable growing weather of the last few days has greatly improved the condition of winter wheat in this locality. Neighboring fields of this crop seemingly have about recovered from the effects of winter injury and soil blowing, and, although stands are rather thin and inclined to be weedy, the wheat is tillering heavily and looks vigorous.

On the rotation field the winter wheat was injured by soil drifting from the roads on to the plots and burying much of the wheat. Where the soil layer was not too thick the plants are coming through, but some of the plots have been cultivated and reseeded to spring wheat.

Maximum temperature 79; minimum 30; precipitation .57 inch.

SHERIDAN:

The weather during the past week was somewhat cooler than during the previous week and was partly cloudy, but with considerable wind. Temperatures still remain above the average for this season of the year, however. Land in the rotation field still plows rather wet, but the surface dried fast.

Sheridan, continued:

All early seedings in the plots were completed. Seedings made during the first week in April emerged early in the week. Spring plowing for flax was plowed and disked, and other plots for that crop given a first cultivation. The first cultivation of the shelterbelt was completed.

Maximum temperature 77; minimum 26; precipitation .14 inch.

DICKINSON:

Field work was delayed on several days by rain. Temperatures were above normal toward the first of the week and vegetation made rapid growth. Colder weather toward the end of this week with frost on two nights slowed down the rate of growth.

Grasses have developed rapidly and now have nearly as much growth as they showed a month later in 1929. Crested wheat grass has made most growth, but the advantage over brome and slender wheat grass is less than in 1929 when the spring was cold and dry.

Wheat varieties were seeded in the cereal project on April 18.

Maximum temperature 71; minimum 30; precipitation 1.32 inches.

MANDAN:

Agronomy

The past week has been unfavorable for field work because of rain and snow. Rain started on April 14 and continued on the 15th and 16th. Rain and snow came the night of the 18th.

The soil dried enough on the 17th so that it was possible to seed the wheat in the rotations on the 18th. This is the average date of seeding wheat on the station. Every thing was ready to seed on the 15th. The wheat went in under very good conditions, and the soil is now in excellent condition for quick germination.

Weeds are starting slowly, except peppergrass, which is thick on the station. The rains of last fall favored this weed.

Mandan, continued:

Agronomy, continued.

The indications are that winter rye and winter wheat came through the winter in good condition. There appears to be the best stand of winter wheat in the history of the station. It is, however, badly infested with peppergrass.

It is still a little early to be sure about alfalfa, but there appears to have been some winter killing.

There is a good stand of yellow sweet clover, but no stand of white sweet clover.

Bromegrass and crested wheat grass have made a good growth, and would make good pasture at the present time. There is not the usual difference between the two grasses this spring.

Maximum temperature 66; minimum 31; precipitation 1.44 inches.

Arboriculture

Shipping of hardwood nursery stock to shelterbelt cooperators has continued during the week. Trees have been shipped to 109 new cooperators in Montana, 64 in North Dakota, 54 in South Dakota, and 26 in Wyoming. Trees to replace losses in 1929 plantings have been shipped to 75 cooperators in Montana, 68 in North Dakota, 31 in South Dakota, and 18 in Wyoming. Trees for additions to regular shelterbelts have been shipped to 7 cooperators.

Conifer stock is now being dug and will be shipped during the coming week.

Horticulture

Fruit trees were shipped to cooperators on April 18. Apples and crabs, plums and plum-sandcherry hybrids, currants, gooseberries, grapes, juneberries, and American cranberry bushes were sent out.

The horticultural nursery was planted on April 17, the ground being in excellent condition after the rains. Field planting of fruit trees and small fruits also has been started.

ARDMORE:

The weather during the week was favorable for growing crops. There were several periods of precipitation of insufficient amounts to interfere with field work for more than an hour or two at a time.

Field work consisted of general repairing of fences, hauling manure, and the preparation of flax plots for seeding.

All crops were emerged by the end of the week and generally good stands were observed.

Maximum temperature 73; minimum 31; precipitation .60 inch.

ARCHER:

The weather during the past week has been cool, windy, and threatening. At times flurries of snow or showers of rain driven by a gust of wind would delay field work a few hours.

During the week the tractor and the teams have been busy with field work. All the dry-land plots have been duckfooted and the seedings of spring wheat, oats, and barley have been accomplished. All the small grains in the dairy field, 76 acres, have been seeded and listing of sunflowers has started. Eighteen acres of land listed last fall have been worked down. Some manure has been hauled but this work gave way to field work.

Winter wheat is making a good growth. The plots seeded with the common drill have a very poor stand, probably only 5 per cent. In the dairy field 17 acres of spring wheat, and 17 acres of barley have emerged. Dates of seedings of spring wheat and winter wheat made March 15 and April 1 have emerged. The cultivated grasses and alfalfa have made rapid growth and the prairies are turning green. The region is in need of a good rain.

Maximum temperature 76; minimum 30; precipitation .24 inch.

AKRON:

The early spring seeding of the sowed crops was completed during the week, except a few blocks of seed increase grain which will be seeded early next week.

Grain seeded April 5 had not emerged preceding the rain of the past week. Thus it appears that nothing was lost this year by the necessary late date at which all early spring small grain were sown.

Second Annual Feeders' Day passed into history with the close of Thursday, the 17th. The weather was favorable but the rain of the day before may have interfered some with the crowd, especially from a distance. As it was, a very interested crowd estimated at 400 to 450 was present at the station in the forenoon, and at Akron in the afternoon. Hog millet proved 98 per cent as good as No. 5 Yellow corn for fattening hogs this year. The average for the two years' work now stands at practically 100 per cent the value of yellow corn. For the fattening lambs the hog millet proved much better than last year when its value as compared to yellow corn was only 84 per cent.

Field work consisted of seeding, plowing the two sheep rotation fields for corn, plowing the stubble land for the rate and spacing corn experiment, and reseeding the brome, alfalfa, and sweet clover plots on the rotations. Other work consisted of feeding experimental animals and of work incident to the Feeders' Day.

A nice drizzling rain totaling 1.02 inches fell Tuesday night and Wednesday which will prove very beneficial for the winter and spring seeded crops. Land is plowing almost wet.

Maximum temperature 74; minimum 32; precipitation 1.02 inches.

NORTH PLATTE:

Rain has been quite general over the State during the past week. This station recorded a total of 2.05 inches for a three day period. Temperatures have been low, but no frost has occurred. Plum and cherry trees are in full blossom.

North Platte, continued:

A sharp color contrast has developed between winter wheat plots. On fallow, the plants are very dark green. On continuous wheat, the shades of green are lighter and vary somewhat with time of plowing. After corn the color is quite yellow. Good stands of spring grains have emerged.

The station was host to 260 high school students and teachers in two days of judging contests on April 17-18.

COLBY:

Almost the whole week was cloudy and rainy, and much cooler than the week before. All this was welcome. The surface soil was badly in need of moisture, and the cool weather was needed to check the growth of the winter wheat which was growing very rapidly during the hot weather of last week. All spring sown crops are up to good stands and are making excellent progress. The pastures have greened up for the first time this year.

While the night temperatures have been low, and snow fell one night, there has been no frost this week. Most of the fruit trees are in full bloom or coming into bloom. So far none of the fruit appears to be injured seriously, except the apricots.
Maximum temperature 79; minimum 32; precipitation 1.36 inches.

TUCUMCARI:

The painters completed the office on Tuesday, April 15, and left that night for Cheyenne. Moving of office supplies and furniture from bunk house to new office was performed Thursday.

Work the past week consisted of cleaning up of yards, hauling dirt, and planting evergreens. These jobs will require considerable more work before the station presents a sightly appearance.

Tucumcari, continued:

There has been no rainfall since March 19 with the exception of .03 inch April 12. Wheat on the plains is rapidly showing signs of injury from drought, while in certain sections it is badly damaged by cut worms. Prospects for this crop never faded faster, for with the continued drought there have been a few very windy days the past week.

Maximum temperature 86; minimum 35; precipitation since January 1, .52 inch.

Wind velocity 6.5 miles per hour; evaporation 2.293 inches.

DALHART:

The outstanding event for the week was the decidedly unfavorable wind of Wednesday. From noon to about dark the wind blew hard from the west and then gradually shifting to the northwest. From about five o'clock to seven o'clock the soil blowing was severe. The only damage on the station was to the oat plots. The oats were quite severely punished. The young sweet clover which has been trying to emerge for some time was also punished, but there is sufficient seed yet to come so that the stands should not be thinned by this wind. Some sand was drifted into the roadways in a few places. The wind left the station plots and fields in excellent blow condition. All plots, without protection, were recultivated during the week, except those that were being plowed at the time of the wind.

Winter wheat continues to present a good appearance. Rye, except for thin plots, also looks good. Barley is doing well and showed no wind damage.

Work during the week has consisted of removal of dead wood from trees and shrubs, plowing general crop fields, cultivating all bare plots, watering trees and shrubs, planting of cuttings, and picking some Chinese elm seed.

Lilacs and cherry trees are in full bloom. Leaf buds are swelling on grapes.

Maximum temperature 82; minimum 34; evaporation 1.707 inches.

Wind velocity 6.2 miles per hour.

BIG SPRING:

Weather conditions have remained unchanged during the past week; that is, it has continued dry and windy. Fortunately the wind has not blown hard enough to cause any great amount of soil blowing.

The winter wheat plots, which gave promise of making a good crop last winter, have now deteriorated almost beyond recovery. The first date of seeding, which should have been made April 15, was not attempted as the soil was too dry to work.

The M.C.G. plots and fallows were duckfoot cultivated during the week. Other work has consisted of hauling dirt, repairing fence, and trimming hedge.

Maximum temperature 88; minimum 56; precipitation, none.

WOODWARD:

The main feature of this week as of several weeks past is the unbroken drought. At present it doesn't look as though there is much wheat that has any chance to make over five to six bushels per acre. An occasional field that was planted late seems to be in better shape than that which was planted at the usual time. It is probable that much of the wheat acreage will be listed up and put into kafir and milo.

Rainfall September to October was 9.12 inches well distributed, which gave the wheat a splendid start. The winter growth was not excessive, and it was very promising up to a month ago. The rainfall since the first of December to date has been .88 inch in scattered showers. Hence a crop failure that bids fair to be outstanding.

Work of the week has consisted of hoeing and watering ornamentals, and nursery stock planted this spring, as well as some belated pruning. Putting in grape trellises and fences which has occupied much time for the past two months is approaching completion.

GARDEN CITY:

Moisture conditions are somewhat more favorable at this time than last week-end. On the 17th, .59 inch of rain fell and on the 18th, .07 inch more was recorded. This was not enough to be of any lasting value but it freshened things up some and wet the surface soil down approximately a foot. Rain has been falling over most of Kansas this week, and in some places two or more inches were recorded.

Soil moisture samples taken on the 17th in the MC wheat block showed a very dry condition of the subsoil from 18 inches on down to the six-foot zone. The fallow plot was in fairly good condition the first five feet. The other plots were very dry and almost dusty from the second foot on down. Unless sufficient rain falls in the next month, wheat is going to be in very poor condition.

Maximum temperature 85; minimum 38; precipitation .66 inch.

PENDLETON:

The fall sown wheat on the rotation plots does not look very good. The stands are fair, little weedy, yellow color, and growth is slow. A good rain is needed to put these plots in a good growing condition. The soil on these plots was worked up into a dust last fall before seeding and ran together during the winter, the crust now is so hard that a harrow will make no impression.

The rotation and varietal plots have all been trimmed. The alleys have been cultivated wherever there are weeds or volunteer wheat. The entire station was cropped to winter wheat in 1929, so in order to grow the varietal trials of wheat, barley, oats, and the furrow drill trials after fallow it was necessary to lease ten acres of land adjoining the station from a neighbor.

Last week the planting of the shrubs around the residence was completed. A windbreak consisting of Western Yellow Pine, Maritime Pine, Douglas Fir, Red Cedar, Black Locust, Black Walnut, Box Elder and Chinese Elm was planted west and south of the residence. The trees were supplied by the Oregon Forest Nursery at Corvallis. A far larger number of trees were sent than ordered. A nursery of about two thousand little trees was started with the excess trees. A shipment of Caraganas and Russian Olives was received from Mandan Field Station this week.

Maximum temperature 80; minimum 28; precipitation, none.

BELLE FOURCHE:

The weather has been comparatively cool, cloudy, and threatening throughout most of the week. A frost occurred April 17 when a minimum temperature of 28 was recorded, but no apparent damage was done to crops, trees, or shrubbery. A beneficial rain of .36 inch precipitation was received on April 13, and during the last few days there have been a number of very light showers. Except on spring plowing, the rain penetrated down to the submoisture and materially aided the germination of shallow seeded crops. On spring plowing only about 1.5 inches of the surface soil were moistened, and the underlying 2 to 4 inches of soil are quite dry.

Oats, wheat, and barley are beginning to come up on most all cultural treatments except spring plowing. Owing to the lack of moisture, only a partial germination has taken place on spring plowing. The condition of winter wheat has improved very noticeably. Winter rye, alfalfa, and bromegrass have made a good growth, but sweet clover is somewhat backward. Flax and alfalfa were seeded during the latter part of the week.

Maximum temperature 73; minimum 28; precipitation .38 inch.

MAY 21 1930

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

APR 26 1930

REPORT FOR THE WEEK ENDING APRIL 26, 1930.

HAVRE:

Conditions during the past week have been very favorable for this season of the year. Work progressed on the plots the first four days of the week, the second cultivation being given for everything to be seeded.

Barley on the rotations, forage crops, and wheat in Field B were seeded. Rain the night of the 24th delayed field operations the balance of the week. Some of the early seedings of spring rye, wheat, and oats have emerged. One commercial field of spring rye was seeded during the week. Practically all of the land for small grains is ready to be seeded just as soon as possible now.

Leaves are making rather slow progress. Some of tne honey suckles are out in fair shape and gooseberries are also green. The flowering plum is just about ready to bloom.

Native and domestic grasses have made very rapid growth for April and there is fair grazing out on the prairie now. All domestic grasses are growing rapidly.

There is some complaint among farmers who seeded early about a heavy weed growth. Wild oats are especially numerous south of the station.

Maximum temperature 70; minimum 29 (first temperature below 32° to date); precipitation, .35 inch.

HUNTLEY:

A rain amounting to .64 inch falling on the evening of April 24 put a stop to field work over the week-end. As the shower extended over a period of several hours all of the moisture entered the soil and should insure prompt germination of spring seeding.

Fall sown grains have made considerable progress during the week and the stands of spring crops have thickened to some extent but the plots are still more or less spotted. Alfalfa and bromegrass in the pastured plots show the effects of last years drought, heavy grazing in thin stands, and slow growth. Several of the grasses in the testing plots have killed out entirely and most of the alfalfa plots show drought and winter injury.

Huntley, continued:

Field work during the week has included seeding of the wheat and barley variety tests, planting alfalfa and bromegrass pastures, and preparing land for corn.

Maximum temperature 77; minimum 36; precipitation, .65 inch.

SHERIDAN:

The weather continued cool throughout the week, with considerable wind and some cloudiness. Light rain interfered with field work on the 25th. All early seeded grain has emerged. Grass has been making a good growth, but fall seeded grain still continues to develop slowly.

Spring plowing for corn in the rotations was completed, and plowing of other fields for corn and late crops is now in progress. Some of the ground still plows rather wet, but the surface of all spring cultivated ground dried fast during the week.

Caragana seedlings which were received from Mandan during the week were planted.

Maximum temperature 77; minimum 33; precipitation, .25 inch.

DICKINSON:

Cool weather delayed the growth of vegetation to some extent, and frozen soil held up tillage and seeding for a while on two mornings. Warmer weather near the end of the week and a light shower hastened the growth of all crops.

Oats and barley varieties, the first date-of-seeding of flax, and the balance of the cereal nursery were seeded in the cereal project. Field pea varieties, a sweet clover nursery, increase blocks of Ceres wheat and Hannchen barley were also seeded.

About 200 Black Hills spruce and Colorado Blue spruce which were received from the Northern Great Plains Field Station were planted just southwest of the buildings. The orchard and shelterbelt were cultivated.

Dickinson, continued:

Early seeded grains are emerging with good stands. Pasture and grasses have made a good growth and are much earlier than in 1929. Alfalfa is starting ahead of sweet clover, but neither is yet far enough along to furnish grazing though grasses would now provide considerable feed. Crested wheat grass in rows is six to eight inches high and ahead of other forage crops, except that in the 1929 seedings. Slender wheat grass and brome have made about an equal growth. Seedings of crested wheat grass made in 1921 and 1922 are making an early growth about equal to the later plantings.

No winter killing of alfalfa or sweet clover has been noted. Most plants have come through the winter in the best condition of recent years, due to fall and early spring rains and the good snow cover. Some of the winter wheat planted in alleys between grain plots in April 1929 has survived the winter.

Visitors included Mr. R. L. Shotwell, of the Bozeman, Montana, Laboratory of the Bureau of Entomology, and Dr. E. G. Booth, Extension Agronomist, North Dakota Agricultural College.
Maximum temperature 67; minimum 25; precipitation, .14 inch.

MANDAN:

Agronomy.

Field work was delayed by rain on one day.

Oats were planted in the rotations on April 22. This is one day later than the average date of seeding. Seeding of oats for feed in Field P has been practically completed, but was delayed by rain to-day.

Wheat that was planted over a week ago is not yet up. The weather remains too cool for rapid germination.

There has been a good deal of winterkilling of alfalfa on the station and over the country. This was no doubt because of the dry summer of 1929.

Crested wheat grass and bromegrass are both making a good growth.
Maximum temperature 68; minimum 25; precipitation, .13 inch.

Mandan, continued:

Arboriculture

The digging of conifer stock for shipment to cooperators was completed the early part of the week. Shipping operations have been carried on the remainder of the week. Conifer trees have been shipped to 15 cooperators in Montana, 45 cooperators in North Dakota, 17 cooperators in South Dakota, and 3 cooperators in Wyoming.

Land for planting poplar cuttings and lining out surplus nursery stock has been harrowed and packed.

Horticulture

The first spraying of the season was applied during the week. A combination spray of lime sulphur and arsenate of lead was used.

Planting of fruit trees and small fruits has been completed. Rains have put the ground in good condition for planting operations.

A number of Hibernal trees were top-worked to other varieties. Some of the old grafts died out last winter.

The first seeding in the Acre garden was done on April 22, and included the following vegetables: onions, parsnips, carrots, and peas. Other early vegetables including lettuce, spinach, radishes, turnips, and onion sets, were planted in the Coulee garden during the week.

Transplanting of tomatoes for the breeding project and other miscellaneous vegetables and flowers in the greenhouse has been in progress.

The lawns were raked and shrubbery and tree groups cleaned up during the week. Pruning of hedges, shrubs, and trees, has been started and will be continued next week.

The season seems rather backward, with unusual low night temperatures. Asparagus tips have been repeatedly frozen to the ground, and no yields of this vegetable have been secured to date.

Mandan, continued:

Horticulture, continued.

Prunus armeniaca on the grounds and in the field seems undaunted by cold weather, and is in full bloom at the present time.

Among the visitors of the week were Mr. J. A. Munro, Entomologist, North Dakota Agricultural College, and Mr. R. L. Shotwell, Assistant Entomologist, Bozeman, Montana.

BELLE FOURCHE:

Cool, cloudy, windy weather has prevailed throughout most of the week. The temperature dropped down to 27 on the morning of April 22, but none of the growing crops was injured by the frost. A light shower was received the first day of the week and a more beneficial rain of .42 inch precipitation occurred on April 25.

Oats, barley, spring wheat, and field peas are up with perfect stands on all except the spring plowed plots. Small grain is emerging very slowly on spring plowing, owing to the lack of moisture in the surface soil and uneven germination, but satisfactory stands evidently will be obtained. Sweet clover is beginning to come up, and flax appears to be well germinated. Winter rye on corn stubble ground is commencing to joint. Winter wheat on standing corn stalks is making a vigorous growth, but winter wheat on all other cultural treatments has suffered extensive injury from soil blowing and the surviving plants are very weak.

Mr. W. F. Schnaidt, of the South Dakota State College Extension Service, visited the station during the latter part of the week.

Maximum temperature 70; minimum 27; precipitation, .56 inch.

ARCHER:

The week has been typical of spring. The weather has been warm with a few showers and low floating clouds.

Work at the station has consisted of plowing and harrowing odd pieces of land in the experimental field, hauling manure, cultivating trees, digging a seepage pit for the mess hall sewer, and overhauling the tractor, which broke down. Twenty-five acres of land are being seeded to crested wheat grass and alfalfa.

The alfalfa, winter wheat, and cultivated grasses are a bright green. The prairies are becoming quite green. Most stock have been turned out to pasture. Spring wheat, barley and oats in the dairy field are showing above the furrow drill ridges.
Maximum temperature 68; minimum 33; precipitation, .42 inch.

AKRON:

The week was favorable for field work though cloudy a portion of the time. Most of the spring seeding on farms adjoining the station is now completed.

The rotation small grain plots seeded to spring grains have emerged to apparent good stands. Winter wheat has apparently profited by the cooler weather experienced since the rain of last week.

The orchard is blooming very unevenly. Plums were first very early in the week, followed by certain of the cherry varieties and certain of the apple varieties. Montmorency cherry and certain of the apples are only now breaking into bloom.

Persian lilac among the foundation plantings is practically in bloom and promises to present its usual attractive appearance. First mocking bird of the season made his presence known this week-end.

Rotation stubble plots for corn and for fallow were double disked during the week to create better surface tilth and to incorporate the heavy thistle growth with the surface soil. This later operation was not successfully completed due to the very dense weed growth, and if another disking does not more thoroughly accomplish this purpose it may be necessary to rake the weeds and burn them.

Akron, continued:

Disk was in operation practically all week stirring the surface of all open and stubble land intended for later seeding to corn and forages.

Maximum temperature 79; minimum 34; precipitation, .08 inch.

NORTH PLATTE:

Cool, cloudy weather has predominated during the week. The rainfall total was .76 inch, bringing the April total to date up to 2.81 inches, and wiping out the deficit which had been accruing since the first of the year. A temperature of 32 degrees was reached on one night but no killing frost has occurred.

All grain crops are making rapid growth.

Potatoes were planted during the week. Preparations of land for corn planting was begun.

TUCUMCARI:

While localities east and south of Quay County received good rains this week, this section remains the driest on record. The total for 1930 is .58 inch, .06 inch being received during the week.

Wheat is rapidly deteriorating, drought and cutworms each taking a heavy toll. Station wheat plots look surprisingly well and the early plowed and wheat-on-fallow plots may make fairly good yields if moisture is received soon.

Station work the past week has consisted largely in cleaning up the grounds. Considerable listing has been performed, but no other field work attempted.

Yesterday about 400 persons were fed a barbecue dinner in the large implement shed at the station, this dinner being put on by the local Chamber of Commerce. The Highway 66 (Main Street of America) Convention was being held in Tucumcari and some 250 delegates, from Illinois to California, were in attendance. After the barbecue, the visitors were entertained by the world champion trick roper, who now owns a ranch adjoining the station.

Maximum temperature 87; minimum 44; evaporation, 2.104 inches.
Wind velocity 5.6 miles per hour.

DALHART:

A total rainfall of .82 inch on Friday gave a relief to the long drought. This rain came in two different showers and will be of pronounced benefit to wheat in the country around here and to the winter wheat, winter rye, oats, and barley on the station. Practically all fields of wheat were showing droughty spots. While the rain was not general, yet apparently it covered a strip of country not previously reached by the earlier spring rains. It has remained cloudy since the rain so that we have hopes that more may fall.

Lilacs and Spiraea vanhouttei have been in full bloom all week. Both plants have been literally loaded with blossoms. Chinese elm, maple, Russian olive, birch, plum, and apricot trees are just about fully leafed out. The redbud trees are loaded with blossom. Grass has just about gotten sufficiently long enough in the pastures to furnish grazing.

Winter wheat on fallow appears to very good advantage on the station. Winter rye is just starting to head.

Work during the week has consisted of general police work or cleaning up around the farmstead, rebuilding fence, destroying the remainder of the rye used for cover crop, preparation of the land for cotton, and watering trees and shrubs.

Maximum temperature 87; minimum 40; precipitation, .82 inch. Average hourly wind velocity 7.8 miles per hour. The last below freezing temperature for the month was recorded on April 3.

BIG SPRING:

Climatic and soil conditions have improved considerably during the past week. A local shower of .26 inch fell on the afternoon of April 23, and a general rain consisting of .83 inch fell on the night of the 26th. This was the first rain of any consequence that this section has received since last October. It has relieved the suspense, for the time being at least, that this section is not entering upon another dry period such as was experienced during 1917 and 1918.

Big Spring, continued:

Station work has consisted of repairing fence, setting out a row of California privets to complete a hedge row in front of the grounds, and in cleaning up the grounds in general
Maximum temperature 83; minimum 50; precipitation, 1.09 inches.

LAWTON:

A shower of .09 inch on the 22nd, followed by a soaking rain of 1.22 inches on the 25th brightened farm conditions and prospects very appreciably. This moisture in addition to .64 inch on the 19th is the first of any consequence since the snows of January.

All station fields were in good tilth and penetration was very good, although the last rain fell very rapidly.

Wheat has made some growth in the past ten days, but is still far from much promise. Boot formation is just beginning on the short, poorly developed plants. Growth of oats is yet very slow and the present moisture should greatly benefit the crop.

Corn on the rotation plots was planted April 21. The MC broomcorn, MC sorgo, and listing methods kafir plots were planted April 22. Plowing of fallow plots was completed on the 25th.

Temperatures the past week have been considerably cooler. A minimum of 44 was recorded on the 20th. The maximum ranged from 71 to 84 during the week.

Mr. E. F. Chilcott visited the station April 22.

WOODWARD:

The past week has been cool and cloudy, with a shower of .51 inch on the 22nd, another of .05 on the 24th, and another of .64 on the 25th. This helps the prospects for wheat somewhat, though it is generally conceded that yields will be low in spite of favorable weather from now on.

Woodward, continued:

Work of the week has consisted of excavating for a new house, pulling in ridges on the 240 acres recently added to the station, all of which were listed earlier in the season, and of miscellaneous cultivating and hoeing.

Maximum temperature 87; minimum 48; precipitation, 1.20 inches.

PENDLETON:

The past week has been quite warm and sultry, with numerous thunder storms in the mountains. The total precipitation during the week was .33 inch in three showers. The field work this week has consisted mainly of cleaning up odds and ends, hoeing the fence rows, and cutting the tar weed out of the winter wheat varietal trials.

During the week about 1000 small trees were distributed to the farmers of Umatilla County. A great many farmers found out exactly where the Pendleton Field Station is located.

JUDITH BASIN:

Cool, cloudy weather with light showers favored the growth of winter wheat. Rapid progress was made in tillage and seeding work in Central Montana. Pasture and ranges are in good condition.

Seeding of spring wheat, oats, and barley was completed on the rotation tillage and cereal plot experiments. Grasses and sweet clover were seeded in the rotation and pasture experiments.

Thirteen hundred trees were received from the Mandan Field Station and planted in a well arranged shelterbelt to the north and west of the stock yards. Climatic and soil conditions favor the successful starting of these plantings.

Maximum temperature 68; minimum 30; precipitation, .13 inch.

ARDMORE:

Moderate temperatures and threatening weather prevailed during most of the week, but rain fell on only two days. Field work was possible on all but one day of the week.

Spring plowing for corn was completed during the week. The soil was in exceptionally good condition for plowing and all plots worked down in good condition.

Other work consisted of repairing fences, constructing a cistern to supply drinking water, and setting out trees. About 800 Black Hills Spruce and Western Yellow pine were planted in a spacing test. Soil conditions for planting trees were unusually favorable.

Crops continued to make good growth and are at least two weeks ahead of normal conditions. All plum trees have bloomed, and apple trees are coming into bloom. The native grass has made enough growth to supply some grazing.

Maximum temperature 73; minimum 29; precipitation, .22 inch.

HAYS:

The drought which has prevailed since November has been broken by rain yesterday and to-day with a total of .80 inch, all of which has fallen slowly and entered the ground. Prospects are favorable for more rain.

The rain came in good time for all the small grain crops and will make conditions favorable for the planting of row and all feed crops. The surface soil has been dry for sometime.

The boys' and girls' annual judging contest held yesterday was very well attended in spite of the threatening weather and rain which began to fall early in the afternoon. One hundred and six teams including three contestants, one alternate, and one judge were present as well as many visitors.

The 18th Annual Round-Up and Feeders' Day program was carried out as scheduled for to-day, Saturday, April 26, but the attendance was very small due to the rain.